

Amendments to the Claims:

1. (Currently Amended) A recording apparatus comprising:
a head unit including an actuator which generates energy required for recording predetermined patterns of image on a recording medium;
a circuit board including a driver element which drives said actuator of said head unit;
and
a heatsink having a first surface and a second surface opposite to said first surface, and having at least one of said first and second surfaces disposed in thermally conductive communication with said driver element,
wherein said heatsink has a void portion on at least one of said first and second surfaces, said void portion being ~~which is~~ opposed to said head unit.
2. (Original) The recording apparatus according to claim 1,
wherein said head unit further includes a cavity unit which stores an ink in cavities formed therein,
and wherein said actuator is a piezoelectric actuator which is superposed on said cavity unit and which is operable to eject the ink onto the recording medium.
3. (Currently Amended) The recording apparatus according to claim 1, wherein said void portion of said heatsink includes an aperture formed through said heatsink between said first surface and said second surface such that said aperture overlaps at least a portion of said head unit as viewed in a direction in which said void portion of said heatsink and said head unit are opposed to each other.
4. (Currently Amended) The recording apparatus according to claim 1, wherein said void portion of said heatsink includes a plurality of holes formed through said heatsink between said first surface and said second surface.

5. (Original) The recording apparatus according to claim 1, further comprising a heat dissipation member disposed in thermally conductive communication with said head unit and spaced apart from said heatsink, so as to dissipate heat from said head unit.
6. (Original) The recording apparatus according to claim 5,
wherein said circuit board further includes a wiring board portion which has an end portion superposed on said one head unit,
and wherein heat dissipation member is superposed on said end portion of said wiring board portion of said circuit board, such that said heat dissipation member is opposed to said head unit, with said end portion of said wiring board portion being interposed between said heat dissipation member and said head unit.
7. (Original) The recording apparatus according to claim 2, wherein said cavity unit of said head unit has a surface which is to be opposed to the recording medium, and a plurality of nozzle holes which are held in communication with the respective cavities of said cavity unit and which are open in said surface.
8. (Currently Amended) ~~The recording apparatus according to claim 2, further comprising~~
A recording apparatus comprising:
a head unit including (i) a cavity unit which stores an ink in cavities formed therein, and
(ii) a piezoelectric actuator which is superposed on said cavity unit and which is operable to
generate energy required for recording predetermined patterns of image on a recording medium
so as to eject the ink onto the recording medium;
a circuit board including a driver element which drives said actuator of said head unit;
a heatsink disposed in thermally conductive communication with said driver element and
having a void portion that is opposed to said head unit;
a body frame which accommodates an ink supply source and which includes a bottom plate portion having ink supply passages formed therethrough so that the ink is supplied from said ink supply source to said cavities of said cavity unit of said head unit through said ink supply passages,

wherein said circuit board further includes a wiring board portion which extends along an outside surface of said bottom plate portion of said body frame from said head unit toward a periphery of said body frame,

and wherein said heatsink includes a horizontally extending plate portion which has said void portion and which is interposed between said bottom plate portion of said body frame and said wiring board portion of said circuit board.

9. (Original) The recording apparatus according to claim 8, further comprising a cover plate which covers said outside surface of said bottom plate portion of said body frame,

wherein said horizontally extending plate portion of said heat sink is located between said bottom plate portion of said body frame and said cover plate.

10. (Currently Amended) ~~The recording apparatus according to claim 2, further comprising~~
A recording apparatus comprising:

a head unit including (i) a cavity unit which stores an ink in cavities formed therein, and (ii) a piezoelectric actuator which is superposed on said cavity unit and which is operable to generate energy required for recording predetermined patterns of image on a recording medium so as to eject the ink onto the recording medium;

a circuit board including a driver element which drives said actuator of said head unit;

a heatsink disposed in thermally conductive communication with said driver element and having a void portion that is opposed to said head unit;

a body frame which accommodates an ink supply source and which includes a bottom plate portion having ink supply passages formed therethrough so that the ink is supplied from said ink supply source to said cavities of said cavity unit of said head unit through said ink supply passages,

wherein said circuit board further includes a wiring board portion which extends along an outside surface of said bottom plate portion of said body frame from said one head unit toward a periphery of said body frame,

wherein said driver element is disposed on said wiring board portion,

and wherein said heatsink includes a horizontally extending plate portion which has said void portion and which is disposed on one of opposite sides of said wiring board portion remote from said driver element.

11. (Original) The recording apparatus according to claim 2, further comprising a body frame which accommodates an ink supply source and which includes a bottom plate portion having ink supply passages formed therethrough so that the ink is supplied from said ink supply source to said cavities of said cavity unit of said head unit through said ink supply passages,

wherein said body frame further includes a back plate portion extending vertically from said bottom plate portion,

wherein said heatsink includes a horizontally extending plate portion which has said void portion and which extends along an outside surface of said bottom plate portion of said body frame,

wherein said circuit board including said driver element extends along said horizontally extending plate portion of said heatsink,

and wherein said heatsink further includes a vertically extending plate portion which extends along an outside surface of said back plate portion of said body frame.

12. (Original) The recording apparatus according to claim 1, wherein said circuit board is disposed between said heatsink and said head unit.

13. (Original) The recording apparatus according to claim 3, wherein said aperture is open at one edge of said heatsink.

14. (Currently Amended) A recording apparatus comprising:

a plurality of head units each including an actuator which generates energy required for recording predetermined patterns of image on a recording medium;

a plurality of circuit boards each including a driver element which drives said actuator of a corresponding one of said head units; and

a heatsink having a first surface and a second surface opposite to said first surface, and having at least one of said first and second surfaces disposed in thermally conductive communication with said respective driver elements,

wherein said heatsink has a plurality of void portions on at least one of said first and second surfaces, said void portions being ~~which are~~ opposed to the respective head units.

15. (Original) The recording apparatus according to claim 14, wherein each of said void portions of said heatsink includes an aperture formed through said heatsink such that said aperture overlaps at least a portion of a corresponding one of said head units as viewed in a direction in which said void portions of said heatsink and said head units are opposed to each other.

16. (Original) A recording apparatus comprising:

a head unit including a cavity unit which stores an ink, and an actuator which is operable to eject the ink onto a recording medium and which is superposed on said cavity unit;

a body frame to which said head unit is attached, said body frame having a bottom plate portion formed with an ink supply passage which communicates with said cavity unit;

a circuit board overlying said actuator and including a driver element which drives said actuator; and

a heatsink including a horizontally extending plate portion and a vertically extending plate portion, and disposed in thermally conductive communication with said driver element, said horizontally extending plate portion extending along said bottom plate portion of said body frame and having an aperture opposed to said head unit, and said vertically extending plate portion extending vertically from said horizontally extending plate portion.

17. (New) The recording apparatus according to claim 1, wherein:

one of said first and second surfaces of said heatsink is disposed in thermally conductive communication with said driver element; and

said void portion has an opening that opens in said one of said first and second surfaces.

18. (New) The recording apparatus according to claim 1, wherein:

said heatsink includes a plate portion; and

said heatsink has an aperture which is opposed to said head unit and which is formed through a thickness of said plate portion.

19. (New) The recording apparatus according to claim 18, wherein said circuit board is disposed between said heatsink and said head unit, and is held in contact at opposite surfaces thereof with said head unit and said plate portion of said heat sink.

20. (New) The recording apparatus according to claim 1, wherein said void portion of said heatsink includes an aperture formed through said heatsink between said first surface and said second surface such that said aperture overlaps substantially an entirety of said head unit as viewed in a direction in which said aperture of said heatsink and said head unit are opposed to each other.